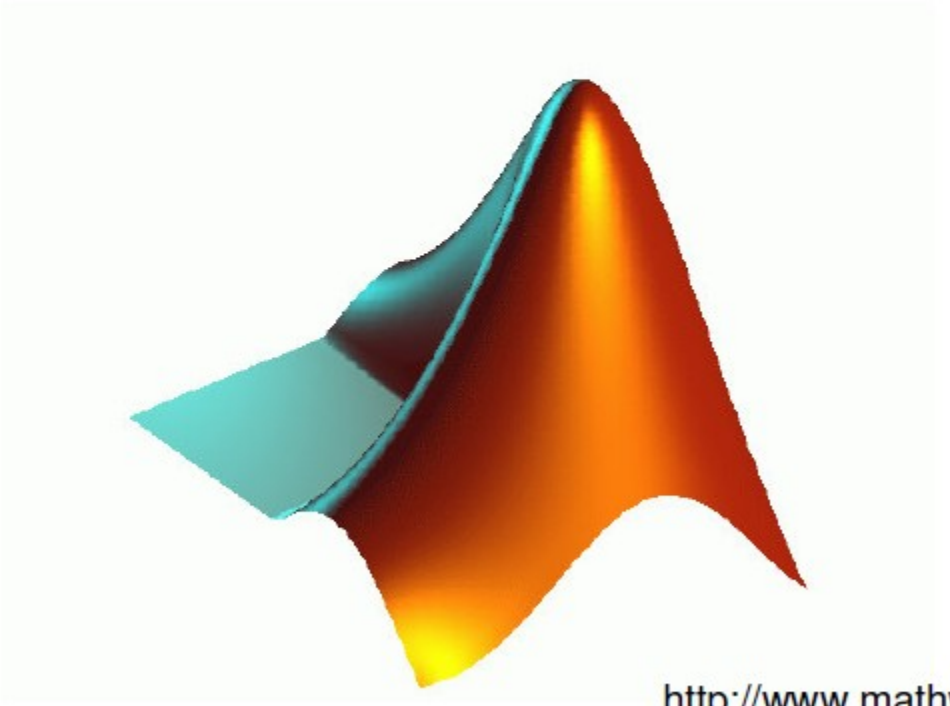
MATLAB ® - The Language of Technical Computing



http://www.mathworks.com

MATLAB Basics

- Where to get help?

1) In MATLAB's prompt type:
   help, lookfor,helpwin, helpdesk, demos.
2) On the Web:
   http://www.mathworks.com/support

Getting started with MATLAB

http://www.mathworks.com/access/helpdesk/help/techdoc/learn_matlab/learn_matlab.shtml

MATLAB tutorial

http://www.math.mtu.edu/~msgocken/intro/intro.html

http://amath.colorado.edu/scico/tutorials/matlab/

MATLAB helpdesk

http://www.mathworks.com/access/helpdesk/help/helpdesk.shtml

MATLAB Primer

ftp://ftp.eng.auburn.edu/pub/sjreeves/matlab_primer_40.pdf

What is MATLAB good for?

-Matrix calculations (MatLab= “Matrix” Lab)

-Manipulating and plotting data… especially large data sets.

-Scientific computing.

-Dynamic system modeling and control system design.

-Much, much more…

MATLAB Toolboxes

MATLAB provides a wide range of toolboxes to address specific user needs, of course these toolboxes come at an additional price

MATLAB Toolboxes

- Communications
- Control System
- Curve Fitting
- Filter Design
- Fixed-Point
- Fuzzy Logic
- Genetic Algortihm
- Image Acquisition
- Image Processing
- *Mapping*
- Model Predictive Control
- Neural Network
- Optimization
- Parallel Computing
- Partial Differential Equation
- Robust Control
- *Signal Processing*
- Spline
- *Statistics*
- System Identification
- Wavelet

MATLAB Toolboxes - Mapping

- MATLAB has added a mapping toolbox (many people still prefer third-party software, discussed later)
- This toolbox can create figures, but also has a separate mapview GUI, from which you can create maps and save them as images, then import the images back into MATLAB figures

M_Map Examples

AIRC_map_all.m – maps aircraft reconnaissance data (the eye diameter measured in a hurricane, and the latitude and longitude of the hurricane at that time, stored in AIRC_data.mat), uses different colors depending on eye size